

Appl. No. 09/880,801
Amendment dated: January 17, 2005
Reply to OA of: October 19, 2004

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1(currently amended). A sample analysis system with chip-based electrophoresis device, comprising:

an auto-sampling device for loading and introducing a sample into a channel, wherein said auto-sampling device is a flow-based auto-sampling device driven by dynamic force, and said auto-sampling device comprises the continuous mode and the discrete mode of sample introduction;

a chip for loading an separation of the sample, wherein said chip comprises at least one sample loading channel, at least one separation channel and at least one connection channel for connecting said sample loading channel and said separation channel;

a power supplier for providing electric voltage to said chip and separating said sample;

a detecting unit for detecting the signal generated by said sample;

a signal collecting unit for collecting the signal of the sample detected by the detecting unit; and

a signal processing unit for outputting said signal.

Claims 2-3(canceled).

4(currently amended). [[A]] The sample analysis system with chip-based electrophoresis device as claimed in claim [[3]] 1; wherein said discrete mode of sample introduction of the auto-sampling device comprises a pump and an injector.

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5(currently amended). [[A]] The sample analysis system with chip-based electrophoresis device as claimed in claim [[3]] 1; wherein said continuous mode of sample introduction of the auto-sampling device continuously loading sample by means of a microdialysis method.

6(currently amended). [[A]] The sample analysis system with chip-based electrophoresis device as claimed in claim 1; wherein said detecting unit is an optical detecting unit.

7(currently amended). [[A]] The sample analysis system with chip-based electrophoresis device as claimed in claim 6; wherein said optical detecting unit is a fluorescent detecting unit which comprises a light source, a lens, an excitation filter, a dichoric mirror, an emission filter, a pinhole, and a photo-multiplier tube.

8(currently amended). [[A]] The sample analysis system with chip-based electrophoresis device as claimed in claim 1; wherein said signal processing unit is a computer.

9(currently amended). [[A]] The sample analysis system with chip-based electrophoresis device as claimed in claim 1; wherein said signal collecting unit converts the collected signal of the sample from analog signal into digital signal.

Claims 10-22(canceled).

23(currently amended). [[A]] The sample analysis system with chip-based electrophoresis device as claimed in claim 1; wherein said sample loading channel of ~~the chip~~ being applied by hydrodynamic force ~~electric voltage~~ generates no electrical field.

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24(currently amended). [[A]] The sample analysis system with a chip-based electrophoresis device as claimed in claim 23; wherein said sample loading channel without electric field is able to perform different treatments on its surface for specific bio-reaction of the sample, and then introduce the sample into the separation channel of the chip for immediate online analysis and detection.

25(currently amended). [[A]] The sample analysis system with a chip-based electrophoresis device as claimed in claim 24; wherein said surface treatment on the surface of the sample loading channel comprises the immobilized matter of antigen, antibody protein and enzyme.